Chapter 15 - Prime Coat and Tack Coat-Section 02748

General:

A prime coat consists of applying a low viscosity bituminous material, usually an MC-70 or 250 at a specified rate to a base course. Its' purpose is to penetrate the existing surface, coating and bonding any loose particles to the surface, provide a dust free surface as well as promoting adhesion between the existing surface and asphalt mix courses.

A tack coat consists of applying a bituminous material, usually a CSS-1h or SS-1h at a specified rate to an existing asphalt pavement ensuring a bond between the old and new courses.

Proper cure time must be allowed in each case before construction traffic is allowed onto primed or tacked surfaces. A blotter material meeting requirements found in Section 02748 may be necessary for primed surfaces if an excess of prime coat is placed. Avoid public traffic on these surfaces if possible, and if necessary only after the applications have properly cured and been blotted if required.

Before the application of prime on the base course, it is extremely important, that the inspector checks and approves the area to be primed. (See Chapter 4, Base Courses). Before application of the tack coat on existing or rotomilled asphalt pavement it is important to make any necessary patches, fill potholes, seal cracks, and clean pavement surface with multiple passes of a power broom. The material applied, as a tack or prime coat, using an approved distributor, will be as specified in the plans or specifications. The application rate will be specified in the plans or as directed by the Resident Engineer. As a point of information note that most of the tack coat material used is emulsified asphalt, it is desired that a specific residual asphalt amount will remain after the water has dissipated hence the specified application rate in the plans. If water is added to the base emulsion by the contractor or supplier the residual asphalt amount will be changed, the inspector should check to see any water added to the base emulsion is in accordance with specifications. The asphalt distributor, used to apply the prime, tack coat, and/or fog seal, consists of a truck or a trailer, on which is mounted an insulated tank and heating system. The distributor is supplied with a power driven pump, designed to handle products ranging from light cold application liquid asphalt to heavy cements heated to spraying viscosity. The back of the tank is fitted with a system of spray bars and nozzles through which the asphalt is forced under pressure. The spray bars should be capable of spraying an application width up to 12 feet. A thermometer is installed in the tank for quick and easy determination of the product temperature.

The liquid asphalt is distributed over the surface uniformly, at the desired rate of application. The Contractor makes sure that the heater; pump, thermometer, and gauges are in good working order. He also ensures that the spray bar and nozzles are at the proper angle and height above the road for correct application. Generally the proper angle for the nozzles is 15 to 30 degrees with relation to the horizontal axis of the spray bar, with a resulting spray overlap resulting in double coverage. "Tiger striping" is an indication that the sprayer system either is not properly adjusted or not working properly.

Related Sections:

01554: Traffic Control

02324: Compaction

02745: Asphalt Material

QMP 508

Prime Coat and Tack Coat

SPEC	INSPECTION LEVEL	INSPECTION OBJECTIVE	INSPECTOR ACTIVITY
02748	Important	Ensure all surfaces are properly prepared.	Inspect and document surface conditions prior to treatment.
	Important	Ensure all manufactured material is certified as per UDOT standards.	Procure and file manufacture's certified scale weight tickets for payment. Be familiar with and follow QMP 508.
	Important	Ensure correct material is being placed at the proper application rate under the conditions required in the specifications.	Inspect contractor's equipment, check material temperatures, at start-up review results and determine if adjustment to application rates need to be done and if equipment is operating properly. Take 1 qt sample if product appearance or behavior is questionable. Document all activities in daily diary or electronic field book.
	Intermittent	Ensure that all prime or tack coat has been properly applied.	Document all activities in daily diary or electronic field book.

PRIME COAT – TACK COAT – Check List

Confirming	Attributes
YES ( ) NO ( ) N/A ( )	Reviewed assigned functions and then reviewed the contract plans, specifications, and special provisions, noting all provisions applicable to the assigned responsibilities.
YES ( ) NO ( ) N/A ( )	Inspect and document surface conditions prior to treatment.
YES ( ) NO ( ) N/A ( )	Ensure all manufactured material is certified as per UDOT standards
YES ( ) NO ( ) N/A ( )	Ensure correct material is being placed at the proper application rate under the conditions required in the specifications.
YES ( ) NO ( ) N/A ( )	Ensure that all prime or tack coat has been properly applied
YES ( ) NO ( ) N/A ( )	Ensure that excess Prime Coat or Tack coat has blotter material
YES ( ) NO ( ) N/A ( )	Completed a Daily Diary on all events for the day.
YES ( ) NO ( ) N/A ( )	Have reviewed all documentation / Certifications and handed all information into the Resident Engineers office.

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